

Abstract

The following report discusses the results of the background research and geomorphological evaluation performed by McCormick Taylor, Inc, for the proposed replacement of State Bridge 503 over the Norfolk Southern Railroad and the proposed Levels Road Culvert associated with the new alignment of Levels Road in Appoquinimink Hundred, New Castle County, Delaware. The objective of these studies was to assess the probability of locating archaeological sites within the APE and provide an archaeological fieldwork methodology for the two projects. The project sponsors are the Delaware Department of Transportation and the Federal Highway Administration.

A project's area of potential effects (APE) is defined by 36CFR§800.16(d) as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties." The proposed The State Bridge 503 project involves replacing the existing three span, plate girder bridge that carries St. Anne's Church Road over the Norfolk Southern Railroad on a new alignment to the north of its existing position. As part of the project, an existing storm water pond in the southeast quadrant of the bridge may be upgraded to accept the additional storm water volume from the proposed bridge. The proposed Levels Road Culvert project involves constructing a culvert that will carry the headwaters of Deep Creek beneath the proposed new alignment of Levels Road. The areas of proposed ground disturbance associated with the temporary realignment of the stream channel and the construction stockpile and staging areas are included within the archaeological APE

In terms of prehistoric archaeological potential, the undisturbed portions of the State Bridge 503 APE are considered to exhibit either a high or moderate probability for containing prehistoric sites. The landforms within the APE conform to the profile of a number of the Native American archaeological sites in the Appoquinimink headwaters based on distance to permanent water and landscape setting. Historic archaeological potential was considered to be low due to the lack of known historic properties within the APE, although the sensitivity for locating historic sites was heightened on the upland landform in the northeast quadrant due to the presence of the cemetery to the east of the APE and the long standing presence of St. Anne's Church. It is recommended that archaeological testing be conducted through the excavation of shovel test pits (STPs) placed at 15 meter (49.2 foot) intervals on well drained upland landforms. Due to the depth of the soil profile, the upland area just west of the tree line in the agricultural field should be tested with 1x1 meter test units (TUs) spaced at 30 meter (98.4 foot) intervals. It is recommended that testing on the T1 terrace landform be accomplished through the excavation of STPs placed at 30 meter (98.4 foot) intervals.

Because many of the previously identified prehistoric sites in the Appoquinimink drainage lie on landforms similar to that found within the APE, the Levels Road Culvert project area is considered a high probability landform for containing prehistoric archaeological resources. Historic archaeological potential was considered to be low due to the lack of historical properties in the vicinity of the APE. It is recommended that archaeological testing within the APE consist of the excavation of STPs at a 15 meter (49.2 foot) interval.